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10/627,034	07/24/2003	Michael L. Crabtree	05-0901 (8470-000118)	3716
29293 7590 08/03/2007 FREUDENBERG-NOK GENERAL PARTNERSHIP LEGAL DEPARTMENT 47690 EAST ANCHOR COURT PLYMOUTH, MI 48170-2455			EXAMINER SY, MARIANO ONG	
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

MAILED

Application Number: 10/627,034
Filing Date: July 24, 2003
Appellant(s): CRABTREE, MICHAEL L.

AUG 03 2007

GROUP 3600

Attorney Ryan W. Massey
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 30, 2007 appealing from the Office action mailed October 3, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 4,741,517	Warmuth, II et al.	5-1988
US 3,897,941	Hirtreiter et al.	8-1975

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warmuth, II et al. (US 4,741,517) in view of Hirtreiter et al. (US 3,897,941).

Re-claims 1-3 Warmuth, II et al. disclosed, as shown in fig. 1-3, an air spring sleeve comprising: an elastomer body 18 having first and second ends configured to be coupled to first and second structures; a first cord 29 embedded in the elastomer body, the first cord wound with a first helix angle with respect to a sleeve centerline and extending from said first end to said second end; a second cord 31 embedded in the elastomer body, the second cord wound with a second helix angle with respect to a sleeve centerline and extending from said first end to said second end; the first cord disposed radially inward of the second cord and the first angle and the second angle are the same (see col. 4, lines 7-12).

Warmuth failed to disclose the helix angle of the first cord is greater than the helix angle of the second cord and the differential helix angle is in the range of approximately 0 to 5 degrees or 0 to 2.5 degrees.

Hirtreiter et al. teaches the helix angle of the first cord is greater than the helix angle of the second cord and the differential helix angle is in the range of approximately 0 to 5 degrees or 0 to 2.5 degrees (see col. 8, lines 1-8).

It would have been obvious to one of ordinary skill in the art to modify the cords of Warmuth with the helix angle of the first cord is greater than the helix angle of the second cord and the differential helix angle is in the range of approximately 0 to 5 degrees or 0 to 2.5 degrees, as taught by Hirtreiter et al., in order to optimize the dynamic flexibility of the sleeve depending upon the type of application.

Re-claim 12 Warmuth, II et al. disclosed, as shown in fig. 1-3, wherein the first cord has a structure similar to the structure of the second cord.

Re-claim 15 Warmuth, II et al. disclosed, as shown in fig. 1-3, wherein said first and second cords being made from polyester, polyester, aromatic polyamides, nylon or steel wire (see col. 5, lines 33-37).

(10) Response to Argument

With respect to page 5, line 8 through page 6, line 2 under "VII. Argument" of the Appeal Brief stated "In Hirtreiter, cords 17 are part of reinforcement 16, which is part of connecting portion 13. As clearly seen in Figure 1 below, ----- The Office Action appears to be impermissibly picking and choosing among the individual elements of the references regardless of the fact that the alleged teachings of a differential helix angle from a non-analogous **non-flexing** connecting portion".

Warmuth (US 4,741,517) disclosed, as shown in Fig. 1-3, an air spring sleeve comprising: a first cord 29 with a first helix angle and a second cord 31 with a second helix angle embedded in an elastomer body wherein both helix angles are the same; wherein the first and second cords being made from polyester aromatic polyamides, nylon or steel wires, see col. 5, lines 33-37.

What Warmuth lacks was the first helix angle of the first cord is greater than the second helix angle of the second cord.

Hirtreiter (US 3,897,941) teaches, as shown in fig. 1, cords 17 may be disposed at an angle of from about 40 degrees to about 50 degrees and cord 9 may be disposed at an angle from about 50 degrees to about 60 degrees, see col. 8, lines 1-8. Hirtreiter is mainly use for the teaching of differential helix angle between the first helix angle of the first cord and the second helix angle of the second cord.

Applicant argued about Hirtreiter alleged teachings of a differential helix angle comes from a non-analogous non-flexing connecting portion.

Nothing in the Applicant's claim language claiming the degree of flexing, rigidity, or non-flexing of the air spring sleeve comprising the elastomer body having the first cord and the second cord. Applicant's arguments are more specific than the claim language.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Mariano Sy *msy*

July 20, 2007

Robert A. Siconolfi 7/27/07
ROBERT A. SICONOLFI
SUPERVISORY PATENT EXAMINER

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